

- 16 -

CLAIMS

1. A plastic compound, comprising

- at least one polymer,
- at least one organic starting compound of at least one ceramic material and
- at least one glass material for forming a glass ceramic with the aid of said ceramic material, which comprises a glass and/or a starting material of glass,

characterised in that

- the glass has a glass transition point  $T_g$  which substantially corresponds to a decomposition temperature  $T_z$  of the organic starting compound.

2. The plastic compound according to claim 1, wherein the organic starting compound is a polyorganosiloxane.

3. The plastic compound according to claim 1 or claim 2, wherein the glass transition point  $T_g$  of the glass lies below 500°C.

4. The plastic compound according to any one of claims 1 to 3, wherein the glass material comprises bismuth oxide and/or boron oxide and/or silicon dioxide and/or zinc oxide.

5. The plastic compound according to any one of claims 1 to 4, wherein the ceramic material and/or the glass ceramic with the ceramic material

- 17 -

comprises at least one element selected from the group Al, B, Ba, Bi, Ca, Mg, N, O, Si, Ti, Zn and/or Zr.

6. The plastic compound according to any one of claims 1 to 5, wherein the volume fraction of the glass in the plastic compound and/or a volume fraction of the starting material of the glass in the plastic mass is selected from the range of 1 vol.% to 30 vol.% and especially from the range of 5 vol.% to 15 vol.%.
7. The plastic compound according to any one of claims 1 to 6, wherein the polymer and/or the organic starting compound of the ceramic material comprises a halogen fraction of less than 1 mol.%.
8. The plastic compound according to any one of claims 1 to 7, wherein the glass comprises an alkali ion fraction and/or a lead ion fraction and/or a phosphate ion fraction of respectively less than 1 mol.%.
9. The plastic compound according to any one of claims 1 to 8, wherein at least one inorganic starting material of the ceramic material is present.
10. The plastic compound according to claim 9, wherein the inorganic starting material is aluminum oxide.
11. The plastic compound according to claim 9 or claim 10, wherein the inorganic starting material and/or the glass material comprises a powder with powder particles having an average powder particle size

- 18 -

D<sub>50</sub> of less than 3 µm and especially of less than 1.5 µm.

12. A product (1) comprising the plastic compound according to any one of claims 1 to 11 for the chemical and/or electrical insulation of at least one component of the product.
13. The product according to claim 12, wherein the component (2) of the product (1) has a cladding (3) comprising the plastic compound.
14. The product according to claim 13, wherein the cladding of the component is a coating of the component.
15. The product according to claim 13 or claim 14, wherein the product is a cable, the component is a cable core of the cable and the cladding comprising the plastic compound is a cable sheath of the cable.
16. The product according to any one of claims 12 to 14, wherein the product is a household appliance and the component is an electrical component of the household appliance.
17. Use of the plastic compound according to any one of claims 1 to 11 to produce a glass ceramic by thermal decomposition of the plastic compound.